

International Association Hydro-Environmental  
Engineering and Research



**Institut für Wasserbau, Universität Stuttgart**

European Engineering Graduate School  
Environment Water (IAHR-EGW)

**A Short Course on:**

## **Sediment Transport and GSTARS Computer Modeling**

**8<sup>th</sup> –12<sup>th</sup>, November 2010, Universität Stuttgart, Germany**

### **Lecturer:**

Prof. Chih Ted Yang, Colorado State University

### **Course Description:**

The short course includes a brief introduction, review, and evaluation of basic concepts and theories used in the development of sediment transport formulas. Reliable laboratory and field data will be used to test the accuracies and applicabilities of sediment transport formulas. Guideline on the selection of formulas for engineering applications will be presented. Yang's book on "Sediment Transport Theory and Practice" (McCraw-Hill, 1966; reprint by Krieger Publication Company, 2003) will be used for this short course.

GSTARS is a series of semi-two-dimensional computer models based on the stream tube concept and the application of minimum stream power theory. GSTARS can simulate and predict morphologic changes of channel shape, width, depth, and bed profile due to natural and man-made events. Field examples of rivers and reservoirs will be used to illustrate the applications of GSTARS. The GSTARS3 User's Manual and executable code will be given to those who attend the short course.

**Framework:** The number of participants will be limited to 30. After successful completion of a short exam at the end of the course, participants will receive a certificate equivalent to 3 ECTS.

**Target group:** The course is directed at those with a Master's degree or equivalent qualification who are interested in improving their understanding of sediment transport modeling, reservoir sedimentation and river morphology change predictions.

**Dates and Venue:** November 8<sup>th</sup> –12<sup>th</sup>, 2010.

The course will be conducted at the Institut für Wasserbau, Universität Stuttgart, Germany

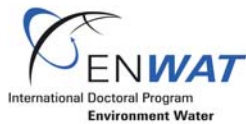
**Fee and Registration:** The course is offered for **FREE**. Participation is based on first –come-first-serve basis. Register as soon as possible!

**Accommodation:** The IAHR-BW can support outside participants to find affordable accommodations (e.g. youth hostels) .

**About the Lecturer:**

Prof. Ted Yang is Borland Professor of Water Resources in Colorado State University and Director of the Hydrosience and Training Center. He conducts research in hydrosience and water resources engineering with an emphasis on erosion, sediment dynamics, river restoration, and computer model development and application. He has published three books, five computer model user's manuals, and more than 100 professional publications in hydraulics, erosion, sedimentation, river morphology, river restoration, and engineering. Research results have received honors and awards from professional societies, universities, and U.S. and foreign government agencies.

**The course is given in cooperation with:**



International Doctoral Program ENWAT, Universität Stuttgart, Germany



Institute of Hydraulic Engineering, Dept. of Hydraulic Engineering and Water Resources Management Universität Stuttgart



IAHR – Baden-Württemberg (IAHR-BW)

**Contact:**

Habtamu Tolossa, M.Sc.

Institute of Hydraulic Engineering, Universität Stuttgart

Pfaffenwaldring 61, D-70569 Stuttgart

e-mail: [Habtamu.Tolossa@iws.uni-stuttgart.de](mailto:Habtamu.Tolossa@iws.uni-stuttgart.de)

Phone: +49-711/685-69175

Fax: +49-711/685-64746